QUIZ (11.12.2017)

Name: …………………………………………………………………………………. Number: ………………………..

Answer each question by drawing a circle around the letter that, in your opinion, corresponds to the correct solution.

1- A call option has an exercise price of $50. At the exercise date, the stock price could be either $50 or $90. Which investment strategy provides the same payoff as the stock?

  a) Lend PV of $50 and buy one call

  b) Lend PV of $50 and sell one call

  c) Borrow $50 and buy one call

  d) Borrow $50 and sell one call

2- A call option on BeingBoing stock, with an exercise price of $60, will either be worth $10 or worthless. The call option has a delta of 0.2.

What is the binomial spread of possible stock prices?

  a) low of $20 and high of $70

  b) low of $50 and high of $70

  c) low of $50 and high of $100

  d) low of $48 and high of $72

3- Suppose FlashandFleshs' stock price is currently $25. In the next six months it will either fall by 50% or rise by 50%. What is the current value of a call option with an exercise price of $20 and expiration of one year?

Assume that the six-month risk-free interest rate is 10% (periodic rate) and use the two stage binomial method.

  a) $19.77

  b) $10.79

  c) $36.25

  d) $17.5

4- The opportunity to defer investing to a later date may have value because:

I) the cost of capital may increase in the near future;
II) uncertainty may be increased in the future;
III) the project has positive, short-term cash flows;
IV) market conditions may change and increase the NPV of the project

a) I only

b) I and II

c) III only

d) IV only

5- Petroleum Inc. owns a lease to extract crude oil from sea. It is considering the construction of a deep-sea oil rig at a cost of $50 million (C0). The construction costs are expected to remain constant. The price of oil P is $40/bbl., and extraction costs are $25/bbl. The rig can extract a quantity of oil, Q = 300,000 bbl. per year forever. (For tractability, assume that all first-year production occurs at the end of the first year.) Assume that the cost of capital and the risk-free rate are both 6% per year. (Ignore taxes.)

Suppose that the oil price is uncertain and can be either $60/bbl. or $30/bbl. next year with equal probability. Calculate the expected NPV of the project if it is postponed by one year. (in Millions)

a) 47

b) 50

c) 59

d) 63

6- A project is worth $15 million today without an abandonment option. Suppose the value of the project is either $20 million one year from today (if product demand is high) or $10 million (if product demand is low). It is possible to sell off the project for $13 million if product demand is low. Calculate the value of the abandonment option if the discount rate is 5% per year.

a) 2,21

b) 1,64

c) 1,21

d) 0

QUIZ (11.12.2017)

Name: ………………………………………………………………………………. Number: ………………………..

Answer each question by drawing a circle around the letter that, in your opinion, corresponds to the correct solution.

1- A call option has an exercise price of $100. At the exercise date, the stock price could be either $50 or $150. Which investment strategy provides the same payoff as the stock?

 a)   Borrow $50 and sell two calls.

 b)   Lend PV of $50 and sell two calls.

 c)   Lend PV of $50 and buy two calls.

 d) Borrow $50 and buy two calls.

2- A call option on XYZ stock, with an exercise price of $80, will either be worth $12 or worthless. The call option has a delta of 0.4. What is the binomial spread of possible stock prices?

  a) Low of $30 and high of $92

  b) Low of $62 and high of $92

  c) Low of $68 and high of $98

  d) Low of $48 and high of $92

3- Suppose Cranberry's stock price is currently $20. In the next six months it will either fall by 50% or rise by 50%. Using the two stage binomial method, what is the current value of a call option with an exercise price of $15 and expiration of one year?

The six-month risk-free interest rate is 5% (periodic rate).

  a) $8.23

  b) $12.96

  c) $13

  d) $24.2

4- The opportunity to defer investing to a later date may have value because:

I) Uncertainty may be increased in the future;
II) The cost of capital may increase in the near future;
III) Market conditions may change and increase the NPV of the project;
IV) The project has positive, short-term cash flows.

  a) I only

  b) I and II

  c) III only

  d) I,II and III

5- Petroleum Inc. owns a lease to extract crude oil from sea. It is considering the construction of a deep-sea oil rig at a cost of $50 million (C0). The construction costs are expected to remain constant. The price of oil P is $40/bbl., and extraction costs are $25/bbl. The rig can extract a quantity of oil, Q = 300,000 bbl. per year forever. (For tractability, assume that all first-year production occurs at the end of the first year.) Assume that the cost of capital and the risk-free rate are both 6% per year. (Ignore taxes.)

Suppose that the oil price is uncertain and can be either $50/bbl. or $25/bbl. next year with equal probability. Calculate the expected NPV of the project if it is postponed by one year. (in Millions)

  a) 35

  b) 38

  c) 12

  d) 13

6- A project is worth $15 million today without an abandonment option. Suppose the value of the project is either $30 million one year from today (if product demand is high) or $10 million (if product demand is low). It is possible to sell off the project for $13 million if product demand is low. Calculate the value of the abandonment option if the discount rate is 5% per year.

  a) 2,14

  b) 3,04

  c) 0,82

  d) 2,04

QUIZ (11.12.2017)

Name: ………………………………………………………………………………………. Number: ……………………….

Answer each question by drawing a circle around the letter that, in your opinion, corresponds to the correct solution.

1- A call option has an exercise price of $100. At the exercise date, the stock price could be either $100 or $175. Which investment strategy provides the same payoff as the stock?

   a) Borrow $100 and sell one call.

   b) Lend PV of $100 and buy one call.

   c) Borrow $100 and buy one call.

   d) Lend PV of $100 and sell one call.

2- A call option on BeingBoing stock, with an exercise price of $90, will either be worth $8 or worthless. The call option has a delta of 0.2.

What is the binomial spread of possible stock prices?

   a) low of $40 and high of $98

   b) low of $82 and high of $122

   c) low of $58 and high of $98

   d) low of $72 and high of $108

3- Suppose FlashandFlesh's stock price is currently $30. In the next six months it will either fall by 50% or rise by 50%. What is the current value of a call option with an exercise price of $25 and expiration of one year? Assume that the six-month risk-free interest rate is 5% (periodic rate and use the two stage binomial method.

   a) $42.5

   b) $11.66

   c) $20

   d) $22.26

4- The opportunity to defer investing to a later date may have value because:

 I) Uncertainty may be increased in the future
 II) Market conditions may change and increase the NPV of the project
 III) The project has positive, short-term cash flows;
 IV) The cost of capital may increase in the near future

   a) I and II

   b) II only

   c) III only

   d) I, II and IV

5- Petroleum Inc. owns a lease to extract crude oil from sea. It is considering the construction of a deep-sea oil rig at a cost of $50 million (C0). The construction costs are expected to remain constant. The price of oil P is $40/bbl., and extraction costs are $25/bbl. The rig can extract a quantity of oil, Q = 300,000 bbl. per year forever. (For tractability, assume that all first-year production occurs at the end of the first year.) Assume that the cost of capital and the risk-free rate are both 6% per year. (Ignore taxes.)

Suppose that the oil price is uncertain and can be either $70/bbl. or $30/bbl. next year with equal probability. Calculate the expected NPV of the project if it is postponed by one year. (in Millions)

   a) 75

   b) 83

   c) 88

   d) 71

6- A project is worth $15 million today without an abandonment option. Suppose the value of the project is either $20 million one year from today (if product demand is high) or $11 million (if product demand is low). It is possible to sell off the project for $13 million if product demand is low. Calculate the value of the abandonment option if the discount rate is 5% per year.

   a) 1,01

   b) 0,9

   c) 0

   d) 0,94

GESTÃO FINANCEIRA II   Lic. - Undergraduate Degree

QUIZ (11.12.2017)

Name: ……………………………………………………………………………………. Number: ………………………..

Answer each question by drawing a circle around the letter that, in your opinion, corresponds to the correct solution.

1- A call option has an exercise price of $82,5. At the exercise date, the stock price could be either $40 or $125. Which investment strategy provides the same payoff as the stock?

  a) Lend PV of $40 and buy two calls

  b) Lend PV of $40 and sell two calls

  c) Borrow $40 and buy two calls

  d) Borrow 450 and sell two calls

2- A call option on XYZ stock, with an exercise price of $50, will either be worth $12 or worthless. The call option has a delta of 0.4. What is the binomial spread of possible stock prices?

  a) Low of $30 and high of $62

  b) Low of $38 and high of $68

  c) Low of $30 and high of $70

  d) Low of $32 and high of $62

3- Suppose Cranberry's stock price is currently $20. In the next six months it will either fall by 50% or rise by 50%. Using the two stage binomial method, what is the current value of a call option with an exercise price of $15 and expiration of one year?

The six-month risk-free interest rate is 5% (periodic rate).

  a) $15.23

  b) $30

  c) $15.71

  d) $8.23

4- The opportunity to defer investing to a later date may have value because:

I) market conditions may change and increase the NPV of the project

II) uncertainty may be increased in the future;

III) the project has positive, short-term cash flows;

IV) the cost of capital may increase in the near future;

  a) I only
  b) II only
  c) I, II and III
  d) IV only

5- Petroleum Inc. owns a lease to extract crude oil from sea. It is considering the construction of a deep-sea oil rig at a cost of $50 million (C0). The construction costs are expected to remain constant. The price of oil P is $40/bbl., and extraction costs are $25/bbl. The rig can extract a quantity of oil, Q = 300,000 bbl. per year forever. (For tractability, assume that all first-year production occurs at the end of the first year.) Assume that the cost of capital and the risk-free rate are both 6% per year. (Ignore taxes.)

Suppose that the oil price is uncertain and can be either $60/bbl. or $25/bbl. next year with equal probability. Calculate the expected NPV of the project if it is postponed by one year. (in Millions)

  a) 63
  b) 35
  c) 38
  d) 59

6- A project is worth $15 million today without an abandonment option. Suppose the value of the project is either $25 million one year from today (if product demand is high) or $10 million (if product demand is low). It is possible to sell off the project for $13 million if product demand is low. Calculate the value of the abandonment option if the discount rate is 5% per year.

  a) 1,76
  b) 0
  c) 1,85
  d) 2,76